



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/571,153	11/07/2006	Karsten Beck	13077*124	3644
23416 7590 01/06/2009 CONNOLLY BOVE LODGE & HUTZ, LLP P O BOX 2207 WILMINGTON, DE 19899				
EXAMINER				
FIORTO, JAMES				
ART UNIT		PAPER NUMBER		
1793				
MAIL DATE		DELIVERY MODE		
01/06/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/571,153

**Applicant(s)**

BECK ET AL.

**Examiner**

JAMES A. FIORITO

**Art Unit**

1793

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 11-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CD/CD)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 1 recites the broad recitation fluoride-containing valve metal compound concentration of 0.3 mol/l to 1.2 mol/l with an ammonia concentration of 3 to 15 weight percent, and the claim also recites the volumetric flow rate ratio is from

Art Unit: 1793

1:0.9 to 1:2 with the molar concentration ratios between 1:5.6 to 1:8.5 which is the narrower statement of the range/limitation.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11-26 are rejected under 35 U.S.C. 102(e) as anticipated by Loeffelholz US 2003/0230167.

Loeffelholz teaches oxides of various valve metals or mixtures of two or more oxides in any desired ratio with or without dopants can be used to produce the desired oxide morphologies.  $\text{Nb}_2\text{O}_5$  or  $\text{Ta}_2\text{O}_5$  or mixtures thereof with one another or with other valve metals is preferably used. The oxides are produced using known processes. For example, tantalum and niobium pentoxide ( $\text{Ta}_2\text{O}_5$  and  $\text{Nb}_2\text{O}_5$ ) or mixtures thereof are produced by hydrolysis or combustion of

Art Unit: 1793

tantalum compounds or niobium compounds or mixtures thereof. Preferably they are produced by precipitation of heptafluorotantalic acid ( $\text{H}_2\text{TaF}_7$ ) and heptafluoroniobic acid ( $\text{H}_2\text{NbF}_7$ ) or mixtures thereof from hydrofluoric acid solution by means of bases, in particular ammonia ( $\text{NH}_3$ ), as tantalic acid  $\text{Ta}(\text{OH})_5$  or niobic acid  $\text{Nb}(\text{OH})_5$  or mixtures thereof and subsequent heat treatment. The desired morphology can be set both by targeted selection of precipitation conditions and during a later part of the process in the hydroxide or in the oxide. With simultaneous metering of the heptafluoro acid and ammonia, it is in this way possible, for example in a continuous process, to obtain spherical agglomerates with a uniform particle size distribution in the range from 10-80 microns and a defined pore size distribution. The agglomerate properties are in this case dependent on the concentrations of the starting solutions, the residence time in the reaction vessel and the pH. For example, to continuously produce spherical agglomerates, the precipitation process is carried out with concentrations of the heptafluoro acids of tantalum or niobium or mixtures thereof of between 10 and 300 g/l, but preferably 50-200 g/l, with  $\text{NH}_3$ -concentrations of 1-20% by weight, but preferably with 3-9%, by weight, a mean residence time of the precipitated agglomerates of between 0.25 and 24 h, but preferably between 30 min and 3 h, and a pH at the precipitation process temperature of between 7 and 12, but preferably between 7.3-8.3. Even when different precipitation conditions are selected, it is possible to obtain a targeted spherical morphology, for example by spray drying (Paragraph 32).

Art Unit: 1793

Claims 11-26 rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Brown US 6338832.

Brown teaches a process for producing a valve metal oxide precursor comprising: mixing in a first vessel an aqueous mixture of an ammonia solution and a valve metal fluoride compound at pH of about 6, at a temperature of from 30 degrees C to 95 degrees C for a residence time of from 0.03 hours to 2.0 hours to initiate precipitation of a hydrated valve metal oxide, wherein said valve metal is tantalum or niobium; transferring said aqueous mixture into at least a second vessel for mixing at the same or different temperature and residence time conditions as the first vessel and a pH of between 8 and 9.5 to continue further precipitation of hydrated valve metal oxide; and separating and recovering the hydrated valve metal oxide (Claim 1). The result product may have a BET surface area of 11 m<sup>2</sup>/g (Claim 17).

### ***Response to Arguments***

Applicant's arguments filed 10/30/08 have been fully considered but they are not persuasive.

Applicant argues that the prior does not anticipate or render obvious the newly presented claims 11-26. However, in light of the indefinite nature of claim 11, according to the broadest reasonable interpretation of the claims the prior art would read on claims 11-26.

With respect to applicant's arguments concerning the product limitations of claims 11-26. The prior art processes and the instant process appear to be

Art Unit: 1793

substantially similar, and where the claimed and prior art product(s) are identical or substantially identical, or are produced by identical or substantially identical process(es) the burden of proof is on applicant to establish that the prior art product(s) do not necessarily or inherently possess the characteristics of the instantly claimed product(s), see *In re Best*, 195 USPQ 430.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **JAMES A. FIORITO** whose telephone

Art Unit: 1793

number is (571)272-7426. The examiner can normally be reached on 9am - 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on (571) 272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/James A Fiorito/  
Examiner, Art Unit 1793

/Wayne Langel/  
Primary Examiner, Art Unit 1793



**Application Number****Application/Control No.**

10/571,153

**Applicant(s)/Patent under  
Reexamination**

BECK ET AL.

**Examiner**

JAMES A. FIORITO

**Art Unit**

1793